

Meeting: 1003, Atlanta, Georgia, SS 31A, AMS-SIAM Special Session on Integrable Systems and Special Functions, I

1003-33-1072 **Masatoshi Noumi*** (noumi@math.kobe-u.ac.jp), Department of Mathematics, Kobe University, Rokko, 657-8501 Kobe, Japan. *Special functions arising from discrete Painlevé equations.*

Discrete Painlevé equations provide a nonlinear framework for special functions that are governed by difference equations. In this talk I will explain how elliptic and basic hypergeometric functions arise from discrete Painlevé equations with affine Weyl group symmetry. (Joint work with K.Kajiwara, T.Masuda, Y.Ohta and Y.Yamada: J.Phys.A:Math.Gen. 36(2003) L263-L272; IMRN 2004, no.47, 2497-2521) (Received October 03, 2004)